

Removing paint from synthetic turf

WE CAUGHT MOST OF GRANT DAVISSON'S PRESENTATION on removing paint from synthetic turf at January's STMA Conference and then we spoke recently with the turf manager of the Minnesota Vikings to fill in the gaps in our notes:

Davison calls it the "Zen" factor, the ability to chill out before you paint. "I preach this to new people; relax, have a clear head, and let the machine be an extension of your body," he said. "You have to romance it like dancer when your using a gun to paint logos. You can't be rigid. It's great to see after they figure it out."

Davison says before you paint, you must prepare the field and do it on a good weather day. Groom and clean the turf before painting and clean any areas of built-up paint. Get your supplies together: tape measures, strings, machines, stencils, drift guards, and make sure and test the paint. Then, Davison adds, "Measure twice then measure again."

REMOVING THE PAINT

Davison says removing paint is easier with better results if done by hand and there is a craftsmanship element to it but that he's also used a Mantis machine that's done a good job, he says, especially if you can't rinse. "If you can rinse with a hose you must have drainage underneath," he says, "otherwise you are just pushing the paint into the infill. With no drainage, you probably will need a day and a half to drain."

"The #1 way to remove paint is brushes you work by hand, but watch out for those with metal bristles because you can tear your turf fibers. Plastic bristles might be preferred because while metal does a great job, it hurts the turf."

Davison recommends scrubbing the hashmarks by hand in particular, saying the extractor machines aren't perfect.

"Talk to your manufacturers, both the turf company and the paint company, about removal products. There are sprays that will sit for 5-10 minutes and then you can scrub the paint off with damaging the fibers."

Davison says you spray the remover product and let it set to give the chemical time to work. "When you scrub by hand using plastic bristles, first go one way then the other. This is a great workout and also can be used as punishment!" says Davison. "For quicker changeovers, you can use a machine, for example hiring out a Stanley Steemer."

Getting "ghosts" of paint, the result of not doing a good enough job cleaning off paint, happens to everyone, Davison says. "You'll get a faint image that you can groom in a couple of different directions, which will take eyes off the ghost."

REPLACING INFILL

Whether you extract the paint or scrub it away, you will displace infill, perhaps an estimated half pound for every 15 minutes of mechanical scrubbing. Davison uses an infill depth meter to check where infill have been moved so he can replace it and brush and groom it in. "Grooming afterward is important, it disperses the crumb rubber evenly and gets your blades to stand up. Having those fibers stand up is more important than any patterns the marketing department might prefer, he says.

"Also, if you don't regularly remove the paint that built-up paint will increase compaction on your field and becomes a safety issue," he says.

ASK THE EXPERT

Doug Schattinger, president of Pioneer Athletics, answered a few questions via email recently on the subject of removing paint from synthetic turf.

SportsTurf: What is the difference between regular field paint and paint manufactured to be more easily cleaned from synthetic turf?

Schattinger: First, you have grass paint that is sometimes relabeled as removable synthetic turf paint. The recommended remover solution is often something like Simple Green or other general cleaner available from a large hardware store.

In reality using grass paints on a synthetic turf field is a double-edged sword. First, there is nothing in the chemistry of grass paints that would encourage the paint to stick to polypropylene. Second, there is nothing in the chemistry in grass paints to allow for removal from synthetic turf fibers (or any other surface). Therefore, we commonly find that grass paints will unevenly flake off the synthetic turf fibers and what paint remains on the fibers can be incredibly difficult to remove. Usually cleaning products like Simple Green are used in the hope that with sufficient scrubbing and any decent detergent, the paint will come off enough to meet minimum expectations.

Unfortunately, the paint that does come off comes off in flakes. The flakes get caught in the infill which can cause compaction and elevated G-Max ratings over time. Paint manufacturers will sometimes recommend that the customer add soap to the paint before application with the hopes that this would make removal easier. This can make the paint a little easier to remove. However, adding soap does not prevent the paint from flaking off and contaminating the infill.

Next you have removable synthetic turf paint with specially formulated remover solutions. These paints are designed to be removed from a synthetic turf field when the resin (glue) dissolves when interacting with the remover solution. When you apply the remover solution to a painted surface, you should be able to wipe a paper towel across the surface and wipe away paint with no scrubbing or agitation.

To remove the paint completely, the customer would apply the remover solution, agitate the painted fibers and rinse the paint through the infill. The latex (glue) should completely dissolve. When thoroughly rinsed through the infill, there should be no paint build-up in the infill. Agitating the paint with a special machine or a deck brush allows the re-

TIPS for removing paint on artificial turf

When painting artificial turf, it is important to put down a light coat. Airless sprayers are ideal for application of just enough paint to hide the green without soaking down into the rubber infill. It takes several days of good drying weather for paint to fully cure. Keep this in mind when deciding whether you want the paint to remain for a short or long period of time before removal. It is easier to remove paint a day or two after application, but it holds up better if it has a few good days to dry before use, especially if foul weather is expected.

Avoid removing paint in the heat of the day as it gives the remover more time to break down the coating before drying.-
David Simmons, World Class Paints

remover solution to interact with the entire coated surface, not just the top layer. Each removable synthetic turf paint performs differently.

There are two key elements in this system that need to work together: First, the paint needs to be carefully formulated:

- It needs to stick to polypropylene fibers.
- The pigments must be carefully chosen so they do not stain white lines or colored logos.
- The resin system must release completely when exposed to the remover solution.
- The formulation must be friendly to players and the environment.

Second, the remover solution needs to be carefully formulated for synthetic turf:

- The remover solution must completely dissolve the resin system.
- The remover solution must not harm the backing layers, the glues used to adhere seams in the turf, or the urethane backing.
- The remover solution must not alter or harm the infill materials.
- The remover solution must be friendly to players and the environment.

ST: What procedures do you recommend that your customers follow to successfully remove paint from synthetic surfaces?

Schattinger: First, apply the paint with an airless sprayer at around 900-1,000 psi. If the pressure is too high, the paint is blown into the infill which makes removal more difficult. Using low pressure machines can allow the paint to drip down the blade into the infill making removal more difficult. Apply the least amount of paint necessary to get the desired look.

Apply a liberal amount of remover solution using a pump up sprayer or equivalent. Agitate. Rinse with water. Repeat as necessary. When the field surface exceeds 100 degrees, the remover solution may evaporate very quickly which makes removal significantly harder. We strongly recommend removing during the coolest part of the day. During the summer in the South, we find that we need to remove before 9 in the morning or after 4 in the afternoon. When rinsing, do not allow the water to puddle if you can see any pigment or paint residue in the water.

ST: Are there field hardness/Gmax issues with failure to remove paint regularly or successfully?

Schattinger: Grass paints, wall paints and other non-removable paints will flake off and remain in the infill. These flakes are too small to be removed with synthetic turf groomers and sweepers. Over time, these flakes will clog up the infill which will increase compaction, reduce drainage and can significantly raise Gmax. If contaminated sufficiently, the only recourse is to replace the infill.

Removable synthetic turf paints, if not thoroughly rinsed through the infill can re-set once the remover solution evaporates. This process can effectively glue infill together hurting drainage and raising Gmax. However, the removable paint will re-dissolve when treated again with the remover solution which would allow for a field manager to thoroughly rinse the paint through the field. In facilities that require regular painting and removal cycles and have little to no drainage, the customer may need to use water extraction equipment to remove residual paint. This is especially important for indoor facilities with regular field conversions.

VAIL EXPERIMENT

Tony Giroux, sports field manager for the Vail (CO) Recreation

District, recently used LinkedIn to ask for advice on removing paint from synthetic turf. We asked him about the response. "I found the LinkedIn responses very helpful. Most of the responses suggested that the mechanical brush is best to use to remove synthetic turf paint; manually brushing the paint with a push broom is another budget beater method. Unfortunately I have yet to try these methods out on a large scale. You see, I manage all natural turf fields here in Vail. A quick drive down the road from us is the Vail Mountain School. VMS maintains a well maintained synthetic soccer field and our plan for the summer was to use this field in a "rain-out" situation where we may be hosting a lacrosse tournament and our natural fields are too wet to play on. Our thoughts were to use the synthetic erasable paint to quickly paint a field on VMS property and continue the tournament during inclement weather. Since the season is still relatively young, I haven't had the opportunity to try out our removing skills with the exception of a "test strip" measuring about 3 feet long.

"I purchased GameLine aerosol removable marking paint with Blitz remover solution. We performed a quick removing test on the test strip. The removing results were nearly instantaneous. After letting the paint dry, we sprayed Blitz directly onto the dried paint. Then we agitated the paint and solution together using a stiff bristled push broom while washing away with water poured from a 5-gallon bucket. This test was done in late April; current irrigation systems were not yet charged hence the bucket of water used instead of a watering hose. However, we were very surprised with what little water pressure was needed to remove the paint once Blitz solution and agitation were applied. While continually pouring water from a 5-gallon bucket to remove paint from an entire field is not only unsuitable but highly inefficient, it worked unbelievably well for our small test strip." ■

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